

IN THE SPECIFICATION:

Please amend Paragraphs [033], [035], [036], [038], [043], [044], [048], [055], [057], [059], [060], [062] and [066] as shown below, in which deleted terms are indicated by double brackets and/or strike through, and added terms are indicated by underscoring.

[033] The crankcase 1 comprises first and second, that is, left and right case halves 1a and 1b which are bonded to each other on a bonding plane P perpendicular to an axis of a crankshaft 5 which will be described hereinafter, thereby defining a crank chamber 4 therebetween. A crank portion ~~[[1c]]~~ 5c of the crankshaft 5 is accommodated in the crank chamber 4. First and second journal portions 5a and 5b at laterally opposite ends of the crankshaft 5 are supported by opposed sidewalls of the first and second case halves 1a and 1b with first and second ball bearings 6a and 6b interposed therebetween. An oil seal 7a is mounted on the sidewall of the first case half 1a adjacent the outer side of the first ball bearing 6a, to come into close contact with an outer peripheral surface of the first journal portion 5a of the crankshaft 5. The second ball bearing 6b is formed to have a seal.

[035] A head cover 10 is bonded to the front end of the cylinder head 3 to define a second valve-operating chamber 9b between the head cover 10 and the cylinder head 3. A pair of rod passages ~~5e, 5e~~ 55, 55 are provided in the cylinder block 2 to provide communication between the first and second valve-operating chambers 9a and 9b.

[036] A piston 11 slidably received in a cylinder bore ~~[[1a]]~~ 2a is connected to a crankpin 5p of the crank portion ~~[[1c]]~~ 5c through a connecting rod 12. In this process, a needle bearing 17 is

interposed between the crankpin 5p and a larger end of the connecting rod 12.

[038] More specifically, disposed in the first valve-operating chamber 9a are a driving timing gear 20 formed on the crankshaft 5, a camshaft 22 rotatably supported at its opposite ends by the second case half 1b and the side cover 8, a driven timing gear 21 driven at a reduction ratio of 1/2 from the driving timing gear 20, a cam follower shaft 23 supported at its opposite ends by the first case half 1a and the side cover 8, and a pair of cam followers 24i and 24e swingably supported on the cam follower shaft 23 and slidably engaged with an intake cam 22i and an exhaust cam 22e on the camshaft 22. Disposed in the second valve-operating chamber 9b are valve springs 25i and 25e for biasing the intake valve 15i and the exhaust valve 15e in closing directions, respectively, and a pair of rocker arms 26i and 26e pivotally supported in the cylinder head 3 with one ends abutting against upper ends of the intake valve 15i and the exhaust valve 15e, respectively. A pair of pushrods 27i and 27e are disposed in the rod passages ~~5e, 5e~~ 55, 55 to connect the other ends of the rocker arms 26i and 26e and the cam followers 24i and 24e to each other, respectively.

[043] As shown in Figs. ~~[[3,]]~~ 2- 4B and 6, an annular oil passage 31 is formed in the side cover 8 to surround the second journal portion 5b of the crankshaft 5 inside the oil seal 7b. The annular oil passage 31 communicates through a rising oil passage 34 with a small supply chamber 33 leading to a lower portion of the first oil reservoir chamber 28 through an outlet bore 32. The outlet bore 32 is provided in the second case half 1b. The small supply chamber 33 and the rising oil passage 34 are formed between the bonded surfaces of the second case half 1b and the

side cover 8.

[044] The crankshaft 5 is of an assembled type in which the opposite ends of the hollow crankpin 5p are press-fitted into crank arms having balance weights and integrally leading to the first and second journal portions 5a and 5b, thereby forming the crank portion 5c, and an oil bore 35 is provided in the second journal portion 5b. The oil bore 35 opens at one end into the annular oil passage 31 and at the other end into an inner end of an inner race of the second ball bearing 6b. A delivery dish 37 for delivering the oil from the oil bore 35 to a hollow 36 in the crankpin 5p is mounted at one end of the crank portion [[1c]] 5c having a balance weight. More specifically, the delivery dish 37 is deformed axially in a compressed manner to be set so that, upon the coupling of the first and second case half 1a and 1b to each other, its larger-diameter portion is fitted into a shallow annular positioning recess 43 formed in one end face of the crank portion 5c, and its smaller-diameter portion resiliently abuts against an inner end face of the inner race of the second ball bearing [[5b]] 6c. Thus, the delivery dish 37 can be mounted simply and precisely at one end of the crank portion 5c without use of a special securing member.

[48] Referring to Figs.1, 3 and 7, a recovery bore 45 is provided in the cylinder block 2 to open into a lower portion of the second valve-operating chamber 9b. A return bore 47 is provided in a region extending from the cylinder block 2 to the crankcase 1. A bent oil passage 46 is formed in the surface of the cylinder block 2 bonded to the crankcase 1, to extend around the cylinder bore [[1a]] 2a and connect the recovery bore 45 and the return bore 47 to each other. In this process, the return bore 47 is disposed in the rear of the recovery bore 45 (on an opposite

side from the head cover 10) and above the recovery bore 45 and the oil surface of the first oil reservoir chamber 28.

[055] The oil intermittently drawn into the crank chamber 4 is scattered by a centrifugal force to form an oil mist, when it leaves the rotating crankshaft 5. The oil mist is intermittently pumped from the through-bore 41 to the first valve-operating chamber 9a by the opening and closing of the reed valve 42, and passed through the rod passages ~~5e, 5e~~ 55, 55 into the second valve-operating chamber 9b, to thereby lubricate various portions of the valve-operating mechanism 19 between the first and second valve-operating chambers 9a and 9b.

[057] The pulsation of the pressure in the second valve-operating chamber 9b also opens and closes the reed valve 50 in the breather chamber 48. Therefore, when a blow-by gas generated in the crank chamber 4 rises up to the second valve-operating chamber 9b along with the oil mist, the gas is intermittently carried to the breather chamber 48 along with a portion of the oil mist by virtue of the opening and closing, where they are expanded, whereby the gas-liquid separation is conducted. The liquefied oil is returned through the small bore 51 to the second valve-operating chamber 9b, and the ~~brew~~ blow-by gas, from which the oil has been separated, is drawn through the breather pip 52 into the intake system (not shown) and then subjected to a burning treatment.

[059] If the oil O in the first oil reservoir chamber 28 is reduced during its circulation through the crank chamber 4, the first valve-operating chamber 9a, the rod passages ~~5e, 5e~~ 55, 55, the second valve-operating chamber 9b, into the first oil reservoir chamber 28, the oil O in the

second oil reservoir 29 is supplied through the through-bore 30 to the first oil reservoir chamber 28. A total volume of the oil reservoir chambers 28 and 29 is large, so that a large amount of oil can be stored in both the chambers, and hence it is possible to enable the operation of the engine E for a long period.

[060] Moreover, the first oil reservoir chamber 28 is formed in the first and second case halves 1a and 1b constituting the crankcase 1 to surround the ~~crankcase 1~~ crank chamber 4. The second oil reservoir chamber 29 is formed in the second case half 1b and the side cover 8 to surround the second valve-operating chamber 9b. Therefore, the formation of the first and second oil reservoir chambers 28 and 29 can be achieved only by slightly enlarging the crankcase 1 and the side cover 8 in radial directions, to thereby contribute to the compactness of the engine E.

[062] The recovery bore 45 opening into the second valve-operating chamber 9b and the return bore 47 opening into the first oil reservoir chamber 28 are isolated from each other in both a horizontal direction ~~[[of]]~~ and a vertical direction, and communicate with each other through the bent oil passages 46. Therefore, even if the engine is tilted during stoppage of the operation, the oil can be prevented from flowing backwards from the first oil reservoir 28 to the second valve-operating chamber 9b, as long as any one of the recovery bore 45 and the return bore 47 is exposed above the oil surface in the first oil reservoir chamber 28.

[066] In the second embodiment, both first and second ball bearings 6a and 6b supporting first and second journal portions 5a and 5b of a crankshaft 5 respectively have seals. ~~On the In~~

contrast to the first embodiment, an annular oil passage 31 is provided in a first case half 1a to surround the first journal portion 5a, and a delivery dish 37 is mounted to a crank portion [[1c]] 5c on the side of the first journal portion 5a. A check valve as in the first embodiment for providing communication between the annular oil passage 31 and the delivery dish 37 is not mounted in an oil bore 35 in the crankshaft 5. Instead, the annular oil passage 31 communicates with a small supply chamber 33 leading to a lower portion of the first oil reservoir chamber 28 through the following oil passages: an oil passage 61 extending forwards from a front portion of the annular oil passage 31 in parallel to the axis of the cylinder bore [[1a]] 2a through the sidewall of the first case half 1a; an oil passage 62 passing through the bonded surfaces between the crankcase 1 and the cylinder block 2 to extend upwards from a front end of the oil passage 61 along an inner peripheral wall of the cylinder bore 1a; an oil passage 63 passing through an upper wall of the crankcase 1 from an upper end of the oil passage 62 to the side cover 8; and an oil passage 64 passing through between the bonded surfaces of the second case half 1b and the side cover 8 to bypass downwards the second oil reservoir 9b.